

Amendment to the Abstract:

The Abstract has been amended. Please delete the Abstract in its entirety and replace it with the following new Abstract. A revised Abstract is attached.

~~A semiconductor laser device includes an InP substrate and a multi-layered structure formed on the InP substrate, wherein the multi-layered structure includes at least a plurality of active regions for outputting a laser beam, and the plurality of active regions each are provided in each of a plurality of grooves dented toward the InP substrate.~~

In a method for fabricating a semiconductor laser device, a plurality of grooves are formed in a surface of one conductive type of an InP layer. The InP layer is thermally treated in an atmosphere including at least a gas containing phosphorus and a gas containing arsenic in a mixed state, thereby forming a plurality of active regions made of InAsP in the plurality of grooves. An other conductive type of semiconductor layer is formed after the active regions are formed.

Attachment

ABSTRACT

In a method for fabricating a semiconductor laser device, a plurality of grooves are formed in a surface of one conductive type of an InP layer. The InP layer is thermally treated in an atmosphere including at least a gas containing phosphorus and a gas containing arsenic in a mixed state, thereby forming a plurality of active regions made of InAsP in the plurality of grooves. An other conductive type of semiconductor layer is formed after the active regions are formed.